Sovereign Financial Crises: Facing Realities and Building a More Secure Future

E. Gerald Corrigan
Managing Director
Goldman, Sachs & Co.

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I. INTRODUCTION

Good afternoon ladies and gentlemen. In preparation for this afternoon's discussion, I have prepared two sets of remarks. One, which is attached to this text, is entitled, "The Dynamics of Sovereign Financial Crisis-A Hypothetical Illustration." As summarized below, that paper provides a simplified, but realistic, illustration of the manner in which a "typical" sovereign financial crisis unfolds, and it outlines the policy options available to the country in question and to the international community to cope with the crisis. This paper builds on the first in that it seeks to (1) outline ways in which sovereign crisis management can be improved; and (2) more importantly, to outline steps that can be taken to improve policies and practices that will help prevent crises.

The accompanying text reaches a number of conclusions, the most important of which are:

First, Once a foreign currency liquidity crisis strikes, a country's official reserves can be severely depleted in a matter of only 30 to 90 days.

Second, Once a country's reserves are severely depleted (falling, say, below $10 billion) even a near optimal macro and structural policy response will probably not stop the bleeding in the short run. Thus, when there is a sharp run off in reserves, the country will be facing the prospects of de-jure or de-facto default unless it can, one way or another, raise new money or at least obtain some form of interim or bridge financing. Indeed, at the point of crisis, and even assuming credible macro and structural policy changes have been developed and announced, in the short run, the country has only the following — or some combination of the following — policy options:

- **Substantially** raise interest rates.
- Suspend interest and/or principle payments on some or all foreign currency obligations.
- Raise new foreign currency balances — either directly or indirectly via restructurings of existing debts — from private sources.
- Raise new foreign currency balances from official sources.

Third, The question of whether, and under what circumstances the I.M.F. and/or other official bodies should step in and provide financial assistance is an enormously complex question which, among other things, must carefully weigh and balance the contagion and systemic risks of not stepping in against the precedent and moral hazard risks of stepping in and providing financial support.

Fourth, As an entirely practical matter, it is virtually impossible to see how a country can escape from a financial crisis without incurring a substantial decline in economic activity. Indeed, the question is not whether economic activity will decline but rather whether and how to limit and contain the decline. Like it or not, that's the reality.

Fifth, The report clearly illustrates that once a crisis strikes, the country, its creditors, its investors and the official community are left with nothing but bad choices. Like it or not, that too is the reality.

Finally, for all parties there is always the extreme alternative of standing aside and allowing the marketplace to sort things out as the country seeks to adapt its policies. There are more than a few serious minded observers who favor this approach — an approach that strikes me as rolling the dice. And, as everyone knows, rolling the dice is seldom a winning proposition in the short run and never a winning proposition in the long run. That too is the reality.

The harsh realties caused by a sovereign financial crisis are, of course, the reason why the premium for the future rests so squarely on finding pragmatic policies, practices and procedures that can substantially reduce the risk of sovereign crisis occurring or, at least, reducing the contagion risk phenomenon. However, try as we may, we will never succeed in eliminating sovereign financial crises. For that reason, the first order of business relates to identifying areas in which the crisis management process can be improved. This process of identification is important in its own right, but it also helps to identify the areas in which measures must be taken to strengthen crisis prevention.

II. STRENGTHENING CRISIS MANAGEMENT

The discussion that immediately follows is directed at the question as to what can be done to enhance the crisis management process once the crisis has struck. To place that in context, this discussion seeks to focus on things which might have been done faster or more effectively in, for example, the period between late December 1995 and mid January 1996 in Mexico or between late November and late December 1997 in Korea. The more important question of what can be done to reduce the risks of these events occurring is covered in the next section of the paper.

1. THINKING ABOUT CONTINGENCIES — RISK MANAGEMENT

As a matter of routine, all countries should periodically go through the process of **high level** brainstorming about how the country would respond to serious financial adversity. This is especially true when even the most elementary indicators are pointing to gathering clouds in the distance. For its part, the I.M.F. should be doing the same thing, especially since it is evident that the Fund should be the one official entity that is best equipped to see and evaluate the gathering clouds.

Having said that, allow me to quickly add that I do not favor public disclosure of I.M.F. Article III consultations with individual countries in part — to extend the analogy — because storm clouds often blow away and in part because such disclosures would almost surely water down the content and effectiveness of such consultations. However, as a part of its brainstorming on contingencies, the Fund should be especially sensitive to critical gaps in its information and intelligence about individual countries that appear to be vulnerable to financial shocks. Indeed, the mere fact of the Fund seeking to fill such gaps may help the country to better understand the extent to which it is at risk.

2. PROMPT AND BETTER INFORMATION

In every financial crisis I have observed — whether involving a company or a country — one of the major barriers to prompt action is the inability to obtain the right information in a swift and accurate manner. For example, in all of the Asian countries it took days, if not weeks, to piece together vital information which was crucial to designing the optimal damage control strategy. In one case, involving foreign currency obligations arising from financial derivative contracts, piecing together the necessary information proved especially difficult and time consuming and, in fact, was **never** completed in a totally satisfactory manner.

Thus, and putting aside for the moment the question of what information should be publicly disclosed, the Fund, working with other official groups, should develop a check list of critical information which all debtor countries should maintain on an ongoing basis. The ongoing availability of such "management information," while essential to effective crisis management, would also better sensitize countries to developing problems thereby reducing the risk of slipping into crisis.

3. IMPROVED DIAGNOSTICS

The history of sovereign financial crisis since 1982 clearly indicates that despite some common denominators, each crisis is different from the last. Because they are different, they also require at least some differences in approaches to management and containment. As a generalization, for example, the problems in Asia in 1997-98 are very different than the problems in Latin America in the 1980's. Improved and more effective diagnostics necessarily implies a rigorous, non doctrinaire and impartial analysis of both conditions and realistic policy options. It also implies that policy makers — and not just staff even senior staff economists — in the country and at the Fund — must be ongoing parties to both the discussion of diagnostics and especially policy options. Obviously, the better the diagnostics, the better, and the more tailored the remedies will be.

4. CONDITIONALITY

Policy conditionality is, of course, a must. Indeed any private creditor to a troubled private company will impose strict conditionality on new loans or restructuring of old loans. Moreover in the country case, where Fund conditionality is at issue, the Fund agreements with troubled countries can work to provide the governments in question with political cover to do what they would have to do in any event. The latter, of course, assumes the Fund conditionality terms are well conceived and appropriate.

In the days of the "plain vanilla" sovereign crisis which were rooted in obvious macro-policy shortcomings and sovereign debt overhang, the thrust of policy conditionality was reasonably straight-forward. But in cases such as Asia 1997-98, where the problems are more structural than macro-economic and more private than sovereign debt overhang, framing appropriate elements of policy conditionality is not so easy. For example, the closing of the 16 banks in Indonesia and the very restrictive **initial** fiscal targets in Thailand may well have been ill conceived. More generally, framing policy conditionality around structural policy issues — to say nothing of issuing instructions as to how to handle troubled banks — is, to put it mildly, a very delicate undertaking.

While suggesting there are opportunities to strengthen the conditionality process, one fact must be stressed. That is, if the country in question has a large current account deficit, shrinking the current account deficit **necessarily** involves shrinking the domestic savings gap. The latter will almost always imply the need for a smaller budget deficit or a large budget surplus. Thus, with or without Fund conditionality, greater fiscal restraint will often, if not almost always, be an absolute necessity. Moreover, if the country is facing the prospect of large fiscal costs to stabilize the domestic banking system, the fiscal dilemma becomes all the more acute. Like it or not, that's reality

5. ADEQUATE OFFICIAL FINANCIAL CUSHIONS

Another harsh reality lies in the fact that international capital flows are, **and should be**, large and stocks of foreign currency debt are even much larger. That being the case, the amount of resources needed to stabilize sovereign financial crises will also be very large. Thus, if policy decisions are made that entail the I.M.F., the World Bank and/or the regional Development Banks assembling financial "war chests" to be used to provide emergency financial assistance to one or more countries, the "war chest" must be large enough to be credible. Indeed, as a practical matter, it is probably wise to provide financial commitments that are capable of overfunding the anticipated need.

If the financial package is not large enough to be credible to the marketplace, the situation will worsen and the likelihood of the official institutions losing money — something that has rarely occurred — will escalate. Here we confront another harsh reality. Stabilization efforts will require that large sums of money are quickly available. In these circumstances, it is critical that the I.M.F., in particular, has ready access to adequate financial resources. In turn, this is why current efforts to enlarge Fund resources are so essential. Needless to say, it is also why I would urge the United States Congress to enact the legislation needed to secure the U.S. share of the Fund quota increase which, in my judgment, is a vital insurance policy for the future.

6. PRIVATE SECTOR BACK-UP LIQUIDITY FACILITIES

While I do not minimize the difficulties of the task, I continue to have considerable sympathy for the concept of having in place committed private sector standby financing for sovereigns that could be drawn on in the case of emergencies. Such facilities exist in a few countries but draw-downs on these facilities have not been tested in the face of adversity.

The problem that arises with regard to such facilities is that countries don't like to pay risk-adjusted fees for these facilities and creditors don't like to enter into such agreements without restrictions or "conditions precedent", governing the circumstance under which these facilities can be drawn. At least in principle, repurchase agreement-type facilities can minimize some of these problems, but in times of stress, the country may only have access to local currency securities which can be repo-ed.

Having said that, one would think that with all of the creativity we see in contemporary finance, that there must be ways in which such private sector standby financing facilities could play a larger role in helping to better-manage sovereign liquidity crises. Such arrangements, while directly helpful, would also help the "politics" of official intervention and mitigate, at least to an extent, the moral hazard concern.

7. STRENGTHENING HUMAN RESOURCES

Given the complexities of contemporary economics and finance, and especially the complexities of structural policy initiatives and institution building in emerging market countries, the need for highly skilled and very pragmatic personnel at the official institutions and within the countries is overwhelming. In this regard, the issue is often not **more** people, but the need for better trained and experienced, practitioners. To put it differently, we need a mix of "thinkers" and "doers" in a setting in which the "doers" are in particularly short supply.

At the I.M.F., the World Bank, the B.I.S. and elsewhere, new initiatives are being mounted to help address this problem. But, under the best of circumstances, meeting the needs of the human resource side of the equation is going to take considerable time and effort. Partly for this reason, I continue to believe that efforts should be made to find ways in which private sector practitioners can play a more active role in the process. I am not going to go into detail on this subject today, but whether as advisors to official institutions, the governments in emerging market countries, or especially as prominent members of the Fund or Bank, technical assistance missions, private sector practitioners clearly can add considerable value to the effort.

III. CRISIS PREVENTION

Before getting into the specifics as to steps that can be taken to reduce the risk of sovereign financial crises occurring, there are four introductory points that must be stressed. They are:

First, As noted earlier, it is impossible to reduce the risk of the occurrence of sovereign financial crises, to zero or anything close to zero. Having said that, we surely can do better than the recent track record in which at least a half dozen countries have experienced severe liquidity strains requiring large scale official intervention over the last two and one half years.

Second, The contagion risk phenomenon is very real as illustrated by the accompanying charts showing the behavior of sovereign credit spreads and stock market prices in a cross section of emerging market countries during the high water mark of the Asian crisis. Of course, the charts also suggest that (1) markets tend to overshoot in the short run; and (2) part of the contagion risk phenomenon grows out of the fact that an "event" in one country may highlight legitimate problems in other countries. In any event, I would submit that the mere presence of the contagion risk phenomenon — even if there is some evidence that markets are becoming more discriminating — is a reality that policy makers at the national and international level must carefully weigh as they consider the range of realistic policy options once a crisis has struck.

Third, The systemic risk phenomenon is also very real. The systemic risk phenomenon arises in part because of the contagion risk factor, but it cuts much deeper. Indeed, whether we like it or not, the liquidity, credit and operational interdependencies between financial institutions and markets on a global scale are now so vast and so tight that a major problem can cascade out of control inflicting damage on real economies on a broad scale.

Ironically, I would argue that, for a variety of reasons ranging from improved risk management, to more capital and, on the whole, to better supervision, the statistical probabilities of a systemic financial shock are lower today than in the past. That is the good news; the bad news is that I have very little doubt that the linkages and interdependencies are now such that **if** such a systemic financial shock did occur, it would have the potential to do even greater damage than in the past.

In these circumstances, it is utterly foolish to suggest that authorities should throw caution to the wind and either ignore or substantially downplay systemic risk concerns. Moreover, as a practical matter, it seems to me to be the essence of human nature to expect that when eyeball to eyeball with a potentially serious systemic event, authorities will at least tilt in the direction of giving more, rather than less, weight to contagion and systemic considerations.

Fourth, As a consequence of the above, the moral hazard problem is alive and well. By moral hazard, I mean, of course, that the mere presence of the so-called safety net and/or the possibility or probability of official intervention in the event of a major financial shock will protect creditors, investors and others from financial loss. In turn, the prospect of protection from loss encourages such parties to act in an irrational manner by taking on excessive risk. While not disputing the presence of moral hazard, I for one, believe the moral hazard problem is exaggerated by some. For example, as recently documented by the Institute for International Finance, creditors and investors — both domestic and foreign — have incurred significant losses in Asia. Similarly, at the end of the day, bank creditors incurred billions of dollars of losses in the wake of the Latin American debt crisis in the 1980's.

However, even if the scale of the moral hazard problem is exaggerated by some, the problem is there and it cannot be ignored or avoided as we search for better ways to avoid or cope with sovereign financial crises.

With those preliminary thoughts in mind, let me now turn to the steps that can be taken to help reduce the risks of sovereign financial crises occurring in the first place. In so doing, let me also acknowledge that much has been written or spoken by many on this subject in recent months. Thus, much of what follows is a distillation of ideas that are already on the table with some emphasis and additions reflecting areas in which I have particularly strong views. As I see it, the agenda for the future must include the following items:

FIRST, MACRO-ECONOMIC POLICY DISCIPLINE

Obviously, prudent and disciplined macro economic policies are a must. But, as illustrated in a number of Asian countries, appropriate macro-economic policies are a necessary, but **not** sufficient condition, for avoiding acute sovereign liquidity problems.

SECOND, ACCELERATED STRUCTURAL REFORM PROGRAMS

Virtually all emerging market countries must accelerate their structural adjustment programs and policies in a wide range of areas stretching from banking systems (discussed below) to education, legal, labor market, environmental and other areas of endeavor. These structural adjustment programs entail the slow, tedious and painful task of broad-based institution building in a setting in which most such countries are short of the financial and the human resources to get the job done, even over the intermediate term.

Structural reforms and institution building are especially important in the effort to remedy the glaring disparities in income distribution and poverty that characterize so many emerging market countries. Looked at in this light such policies are also central to the effort to maintain political support for the sound policies and open economies that are so central to the long term developmental process.

Obviously, this implies that the industrial countries, the World Bank and the Regional Development Banks must redouble their efforts in these areas. While I do not intend to go into detail here, I strongly believe that constructive ways to encourage large scale private sector involvement in such efforts must be found.

Much is at stake in this area and I would go so far as to suggest that unless structural reforms have a greater and a faster measure of success, not only will the risks of financial crises remain too high, but the political commitment to open, market based economies and democratic political institutions will also suffer.

THIRD, STRENGTHENING BANK AND BANKING SUPERVISORY SYSTEMS

It is widely recognized that most emerging market countries face the pressing need to further reform, restructure and recapitalize their banking systems and substantially shore-up their bank regulatory and supervisory systems. Here too, much has been written on this subject by many, including by myself. While I do not want to be repetitive, I do want to emphasize several points:

For starters, we must be realistic. Thus, we must recognize, for example, that even under optimal conditions, engaging and training large numbers of skilled personnel to supervise and examine banks will take several years. Similarly, even the best of supervisory polices and personnel can only do so much unless there are major enhancements in legal, judicial and credit due diligence systems. In other words, it is fine to speak of the need for improved bank supervision, but achieving that result will only come with time and strengthened supervision — by itself — is only part of the task of building safe, sound and efficient national banking systems.

Fortunately, there are a multitude of new efforts and programs underway at the Fund, the Bank and the

B.I.S., among others, to help accelerate efforts to build effective banking and bank supervision systems in emerging market countries. The greater presence of foreign banks in emerging market countries is also helping to accelerate the process. But, we should have no illusions; building first class domestic banking systems and supervisory systems will be a long and difficult task.

In the meanwhile many emerging market countries must also cope with the daunting task of disposing of huge amounts of bad loans now owned directly, or indirectly, by the Government or the Central Bank in a manner that minimizes the already large fiscal costs of stabilizing the domestic banking system and economy.

As the foregoing may suggest, I am concerned that some observers may grossly understate the magnitude of the tasks involved with the simultaneous effort to (1) reform, restructure and recapitalize national banking systems; (2) build effective supervisory systems; and (3) provide for the orderly and cost effective disposition of tens of billions of dollars of bad loans now effectively owned by governments in a number of countries. For that reason, I believe that the need to organize and coordinate the necessary programs and policies to achieve these ends must be one of the highest priorities for the community of nations and for the relevant multinational official institutions working in partnership with the private sector within the affected countries and within the industrial countries.

While this overall task is daunting, countries are not powerless to take certain constructive actions in the short run. Among the actions that can be taken in the short run are the following:

- To announce, as has been done in several countries, fixed time schedules to phase in new standards in such areas as: (1) the definition of non-performing loans; and (2) capital adequacy.

- Through regulation or legislation to sharply limit, or even eliminate, interconnected lending and investing between banks and industrial groups having common ownership or control.

- To aggressively monitor and supervise foreign currency borrowing and lending by domestic banks as well as uncovered or unhedged foreign currency borrowing by domestic corporations.

Such efforts, while far from panaceas, will at least help to insure that current problems do not get worse, while at the same time providing some of the building blocks for the future.

FOURTH, IMPROVED TRANSPARENCY AND DISCLOSURE

Since this item is on every list of improvements for the future, I will not go into the subject in any detail except to make two points of emphasis. First, two areas of statistical need strike me as especially important. They are: (1) to improve the quality and timeliness of balance of payments statistics, especially as they pertain to the capital account; and (2) to build comprehensive data bases regarding private sector — bank and non-bank — foreign currency obligations, including obligations growing out of financial derivatives and other forms of contingent claims.

The second point I want to stress relating to greater transparency and disclosure is in the form of a word of caution. The cautionary note is to emphasize that disclosure and transparency, while highly desirable, are not fail-safe. For example, we have had financial accidents of consequence in countries such as the United States and the UK where such standards are quite high. Similarly, even with the defects in standards in some countries, one could argue that at least some of the events in Asia last year should have been better anticipated by markets and others.

FIFTH, RISK MANAGEMENT

In looking at virtually all sovereign financial crises, there is one striking common denominator present in virtually every case and that common denominator is the presence of very large amounts of short term foreign currency debt, by the sovereign, the banks or the corporate sector, or by all three. In many, but not all, cases there has also been an astonishing amount of exchange rate exposure often linked to complex patterns of interest rate exposure.

Clearly, there are ways in which the nature of these risks and exposures can be better understood and better managed. Part of this, as noted above, comes down to better information. More fundamentally, however, it seems clear to me that sovereign states should have in place the kinds of comprehensive risk management systems that are commonplace among major internationally active financial and non-financial corporations.

Even at their very best, however, risk management systems can only identify and help quantify the nature of liquidity, interest rate and exchange rate risks that a country is incurring. The critical question is whether the availability of such information will change behavior such as, for example, helping to avoid large concentrations of short term debt exposure. I, for one, have little doubt that behavior will change, but I recognize that even under ideal circumstances, problems can still arise, especially with regard to certain capital account transactions.

For that reason, and recognizing the dangers of slippery slopes, I continue to have some sympathy for governmental or central bank initiatives aimed at "sterilizing" some fraction of short term capital inflows along the lines of the experience in Chile.

SIXTH, ENHANCEMENTS TO I.M.F. POLICIES AND PROCEDURES

It will come, I am sure, as a surprise to none when I say that I believe that the I.M.F. has an absolutely indispensable role to play both in preventing and managing sovereign financial crises. Indeed, as illustrated in the accompanying paper outlining the elements of a hypothetical sovereign financial crisis, in certain circumstances, the I.M.F. may be the **only** source of interim or bridge financing available to a sovereign facing acute liquidity strains. While the Fund is indispensable, one cannot ignore **all** of the criticisms which have been directed at it in recent years.

In that spirit, it seems to me that there are several areas in which the Fund's programs and policies could be enhanced without undercutting the flexibility and autonomy which must be a part of its essence. The areas that strike me as potentially most useful in this regard are: (1) improved surveillance, including more systematic attention to contingencies and formalized risk monitoring; (2) greater transparency with regard to its own finances, operations and programs, while continuing to encourage greater transparency on the part of member countries; (3) more tailored and flexible elements of policy conditionality in a setting in which structural problems are likely to remain at least as important as conventional macro-economic problems; (4) increased coordination with the World Bank and the Regional Development Banks, especially in dealing with banking sector and other structural problems; and (5) maintaining a more open mind with regard to financing alternatives such as highly selective lending into arrearages, greater front-end loading of emergency financing programs, exploring new ways to encourage private sector parallel standby liquidity facilities and, finding ways to support and expedite private sector short-term debt restructurings.

In making these suggestions, especially those pertaining to alternative financing modalities, I am mindful that the Fund — even more than most public bodies — must be careful about precedents and the law of unintended consequences. Nevertheless, in my judgment, there is at least some room to explore such alternatives while preserving the ability of the Fund to be both firm and flexible.

At the end of the day, however, neither the Fund nor its critics can escape the fact that the Fund's responsibilities, together with the difficult circumstances in which it must function, are such that constructive second guessing, if not elements of controversy, will always surround the Fund's activities. For my own part, I believe that, on the whole, the Fund has performed well in what are always difficult conditions.

SEVENTH, GREATER MARKET DISCIPLINE

Taken together, all of the measures outlined in the preceding sections of this paper should work in the direction of creating an environment in which market discipline can play a greater and more constructive role for both suppliers and users of international banking and capital markets. Such a result should work in the direction of reducing both contagion and systemic risk, thereby also working to lessen the moral hazard problem.

But even as improvements take hold over time creditors and investors must either find more effective ways to curb their appetite for risk —

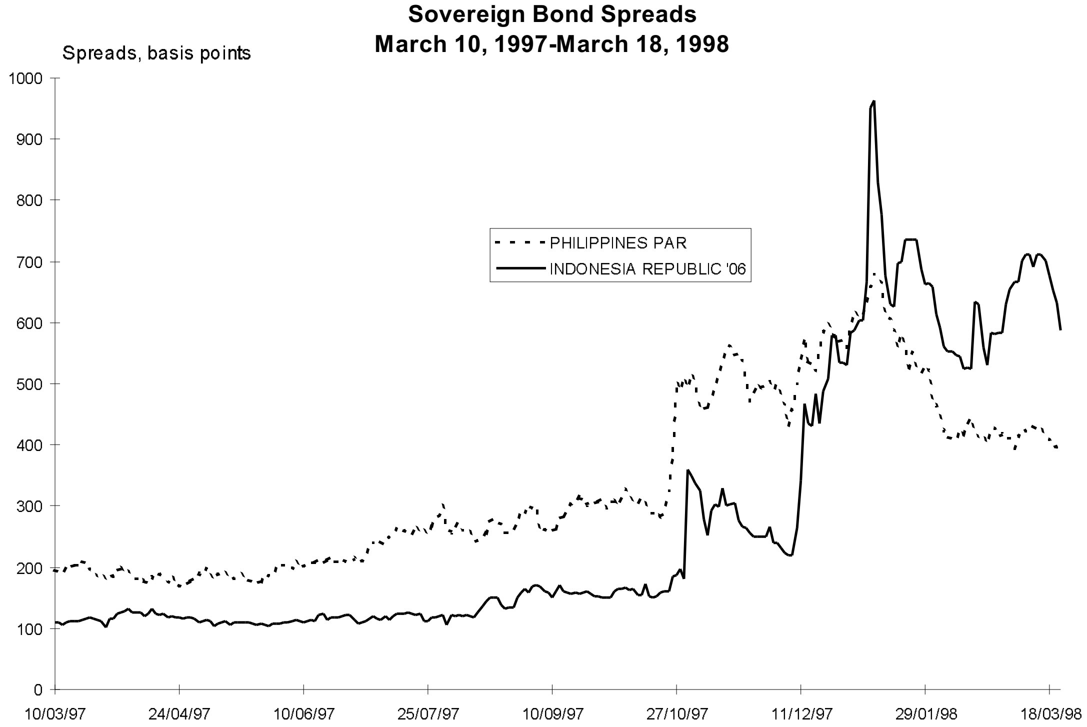
especially when and where herd instincts are powerful — or they must assume more direct responsibility and accountability for adversity when it strikes. The time will come — sooner or later — when the balance of contagion or systemic considerations are such that the authorities will adopt a minimalist approach to what they will do in an effort to stabilize a sovereign shock. When — not if — that occurs, those absorbing losses should not be surprised except by the consequences of their own misjudgments.

IV. CONCLUSION

Over the period since 1982 governments, central banks and multilateral official institutions have intervened in a frighteningly large number of countries to either head off or stabilize sovereign financial or liquidity shocks. On the whole, the damage control effects have worked reasonably well, but at very large costs, especially human costs, in emerging market countries.

By any standard, the frequency and consequences of these events are simply too great. Thus, all parties to the process must redouble their efforts to reduce the incidence of such problems and move toward an environment in which market discipline for all can play a still larger role.

As outlined in these remarks, the agenda for the future is long and difficult. Yet, I for one am confident that we are up to the task if for no other reason than the fact that the rewards for success are so great and the costs for failure are so large that we have no choice but to succeed.



Sovereign Bond Spreads
March 10, 1997-March 18, 1998
Spreads, basis points
PHILIPPINES PAR
INDONESIA REPUBLIC '06
0
100
200
300
400
500
600
700
800
900
1000
10/03/97
24/04/97
10/06/97
25/07/97
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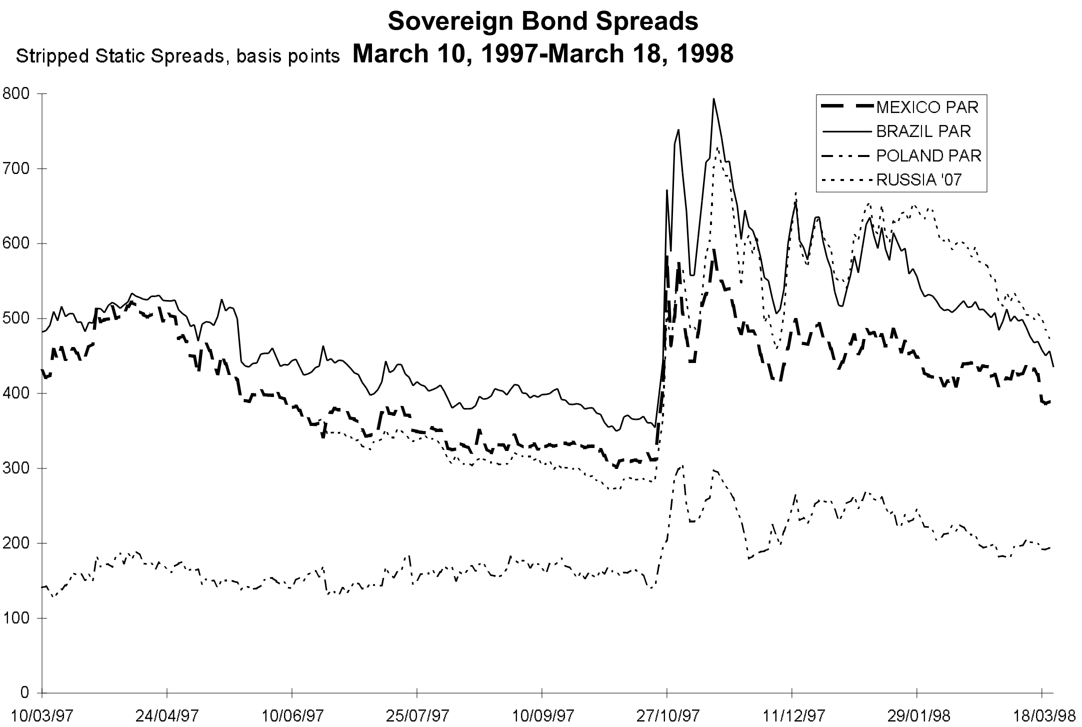
29/01/98
18/03/98



Sovereign Bond Spreads
March 10, 1997-March 18, 1998
Stripped Static Spreads, basis points
MEXICO PAR
BRAZIL PAR
POLAND PAR
RUSSIA '07
0
100
200
300
400
500
600
700
800
10/03/97
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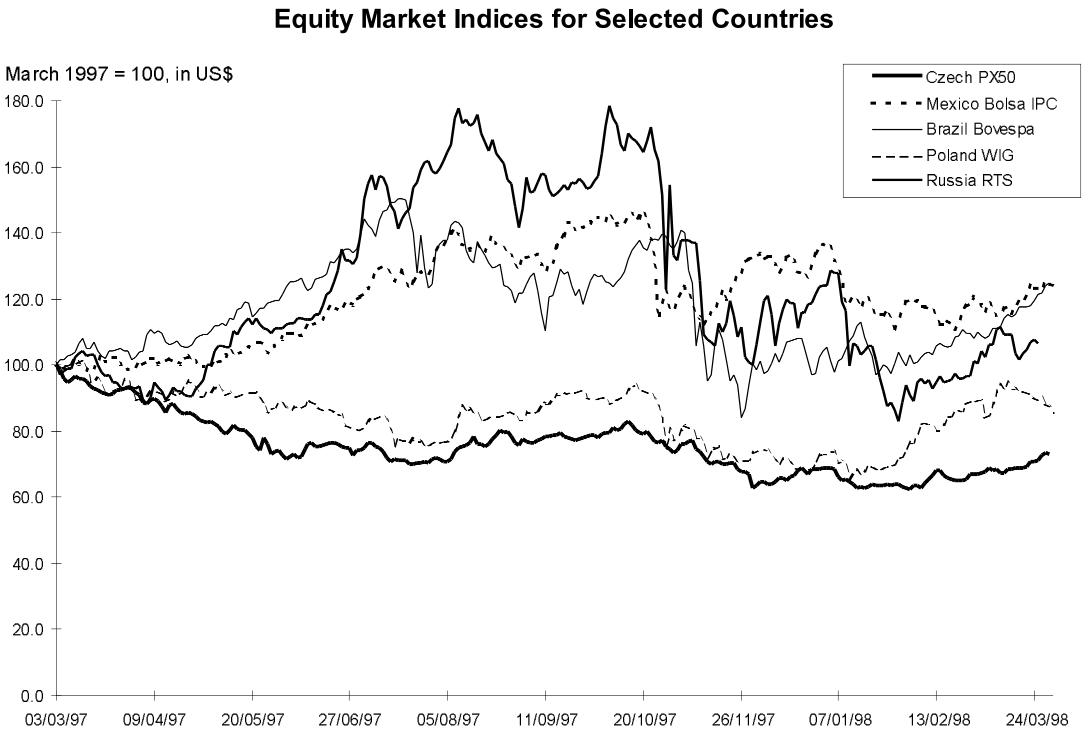
29/01/98
18/03/98



Equity Market Indices for Selected Countries
March 1997 = 100, in US$
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
03/03/97
09/04/97
20/05/97
27/06/97
05/08/97
11/09/97
20/10/97
26/11/97
07/01/98
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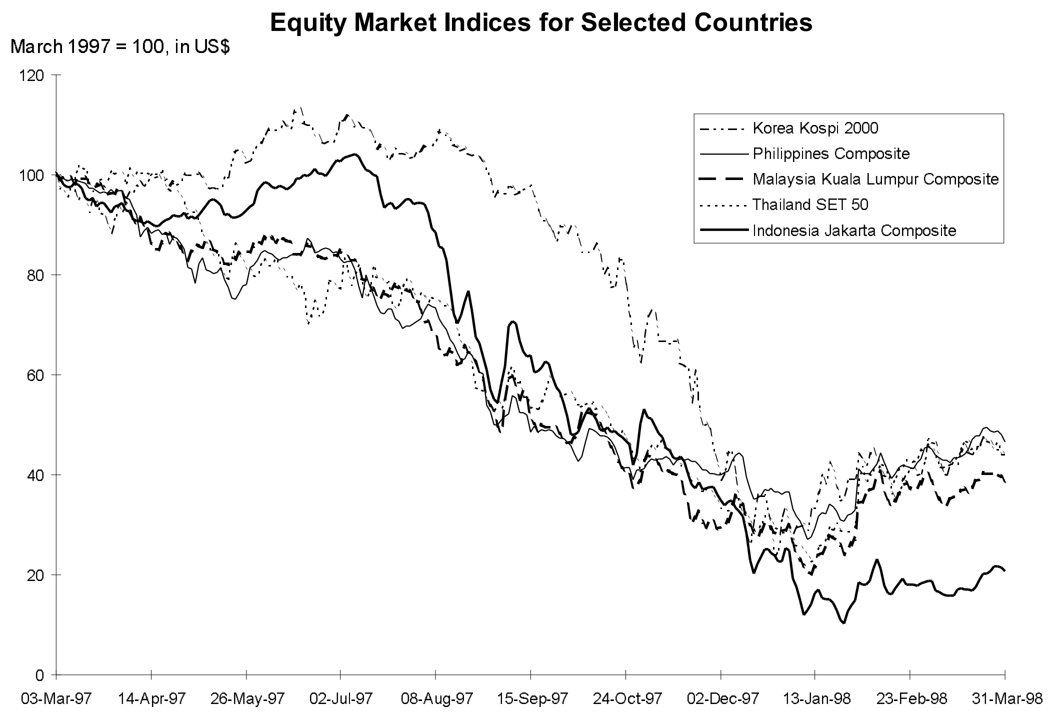
Brazil Bovespa
Poland WIG
Russia RTS



Equity Market Indices for Selected Countries
March 1997 = 100, in US$
120
100
80
60
40
20
0
03-Mar-97
14-Apr-97
26-May-97
02-Jul-97
08-Aug-97
15-Sep-97
24-Oct-97
02-Dec-97
13-Jan-98
23-Feb-98
31-Mar-98
Korea Kospi 2000
Philippines Composite
Malaysia Kuala Lumpur Composite
Thailand SET 50
Indonesia Jakarta Composite

The Dynamics of a Sovereign Financial Crisis A Hypothetical Illustration

Goldman Sachs

Even in sophisticated circles, there is considerable misunderstanding of the dynamics of a sovereign financial crisis such as have been experienced in a number of countries in recent years. In order to help mitigate against this misunderstanding and better clarify the policy options available to the individual countries, their creditors, the I.M.F. and other official bodies, there follows a simplified and stylized illustration of how a more or less typical sovereign financial crisis occurs. The illustration also outlines the policy dilemmas such an event inevitably produces.

While the illustration makes some greatly simplified assumptions and it relies on a simplified structure of current and capital accounts, the orders of magnitude used for the various economic and financial variables are broadly in line with actual experience. In the hypothetical example, for instance, the current account position of the country is broadly similar to that of Mexico in 1994-5 and Thailand in 1996-7. Moreover, neither the economic and financial imbalances assumed in the initial conditions (Table I) nor the assumed short-term impact of the crisis are anything like the worst-case scenarios that have actually been experienced in individual countries.

Thus, while the illustration is hypothetical and the analysis is greatly simplified, the exercise does tell us much about real world experience. Similarly, the discussion of policy options, while also oversimplified, tells us in stark terms that there is no easy nor painless way out of these problems once they have struck. On the other hand, the analysis says nothing about the policies that should have been followed in the first instance in order to prevent the conditions causing the crisis to have occurred. That subject is discussed in the covering paper.

I. INITIAL MACRO ECONOMIC INDICATORS (SEE FOLLOWING TABLES)

Overall macroeconomic performance and policy look satisfactory:

- GDP Growth (7 percent in real terms) is strong (Line I-2)
- Inflation Rate (5 percent) is modest (Line I-3)
- Domestic Saving Rate (34 percent of GDP) is high (Line I-7)
- Fiscal Position (surplus of 1 percent of GDP) is good (Line I-4)
- Money Growth (12 percent) in line with nominal GDP (Line I-5)
- Absolute Level of Reserves ($35 billion)looks respectable (Line I-10)
- External Debt to GDP Ratio (40 percent) is moderate (Line III-4)

Yet, some storm clouds can be seen in the distance:

- Current account deficit (8 percent of GDP) is large relative to GDP (Line II-9)
- Short-term debt service and amortization are two-thirds of imports (Line III-5) and external

SELECTED ECONOMIC INDICATORS FOR HYPOTHETICAL EMERGING

Table 1: Macro Economic Indicators

1	Level of Nominal GDP	$200.00
2	Real GDP Growth Rate	7.0%
3	Inflation Rate	5.0%
4	Fiscal Position (%GDP)	+1.0%
5	M2 Growth Rate	12.0%
6	Level of Short-Term Interest Rates	10%
7	Domestic Savings Rate	34.0%
8	Investment Rate	42.0%
9	Savings Gap (line 8 minus7)	-8.0%
10	Official Reserves	$35.0
11	External Debt	$80.0
12	Maturing in 12 months	$55.0
13	Average interest rate	8.0%
14	External Assets	$40.0
15	Average Return	5.0%

Addendum: Profile of Foreign Debt

Sovereign $20 ($15 matures in 1 yr; of which $5 matures in 6 mths)

Bank $30 ($25 matures in 1 yr; of which $20 matures in 6 mths)

Corporate $30 ($15 matures in 1 yr; of which $15 matures in 6 mths)

Table 2: External Account Flows

Trade Account

1	Imports	$80.0
2	Exports	$68.4
3	Trade Balance	$11.6

Service Account

4	Interest Paid	$6.4
5	Interest Received	$2.0
6	Net Interest	-4.4
7	Other Services	In Balance-0-

Net Current Account

8	Current Account Deficit	$16.0
9	Current Account Deficit as %GDP	8.0%

Capital Accounts

10	Net Foreign Direct Investment	$6.0
11	Net Bank Loans	$5.0
12	Net Portfolio Investments	$5.0
13	Debt	$3.0
14	Equity	$2.0

Official

15	I.M.F.	-0-
16	Other(World Bank, bilateral etc.)	$1.0

17	Net Capital Flows	$17.0
18	Change in Official Reserves	+$1.0

Table 3: Key Ratios and Relationships

1. Current Account Deficit as % GDP (8%) **must** equal domestic savings gap as % GDP (8%) (line II-9 equals line I-9)

2. Excess of net capital inflows ($+17.0) over current account deficit ($-16.0) **must** equal change in reserves (+$1.0) (line II-17 minus line II-8 equals line II-18)

3. Official reserves cover only about 2.25 months of imports (line II-1 divided by line I-10)

4. External debt to GDP ratio is 40% GDP (line I-10 divided by line I-1)

5. External debt maturing within one year is two-thirds of total imports (Line I-11 relative to II-1)

6. External debt maturing in six months is more than 70 percent of official reserves (addendum to Table I relative to Line I-10)

7. Bank loans and portfolio investment are financing two-thirds of current account deficit (line II-11 plus line II-12 divided by line II-8)

debt maturing in six months or less is more than 70 percent of reserves (Line III-6)

- Reserve coverage of imports which is only about 2 and one-quarter months is low (Line III-3)

- Bank loans and portfolio investment in the capital account are financing about two-thirds of current account deficit (Line III-7)

- Available information suggests high incidence of non-performing loans in banking system in a setting of very rapid growth in credit coming from both banks and securities markets, all of which is suggestive of looming large credit quality problems.

- Available information suggests conditions often associated with credit induced bubble in certain classes of asset prices, including real estate, are present.

Possible implications of storm clouds:

- Level of reserves not likely to be sufficient to absorb significant foreign currency liquidity pressures.

- Excessive reliance on short-term external borrowing represents a major source of potential vulnerability.

- Current account deficit **and** the domestic savings gap **must** narrow.

- Continued high growth not sustainable without major structural changes in domestic economy and financial system.

- Time available for policy initiatives is likely to be quite limited.

II. INTERNAL OR EXTERNAL SHOCK OCCURS

The Country in question experiences a major economic, financial or political shock which significantly undermines internal and external confidence. There are many possible sources of shock including:

- **Political** - sudden death of popular and powerful head of state.

- **Economic** - sudden sharp rise in price of imports such as oil or sudden sharp drop in price of commodity exports.

- **Financial** - sudden failure of one or more domestic banks.

- **External** - contagion effects of severe problems in nearby country in broadly similar economic and financial condition.

- Persistent external imbalances in the face of apparent unwillingness of Government to modify policy causes loss of domestic and international confidence.

Whatever the proximate cause of the shock, let us further assume that the country is known to have a weak domestic banking system with a large incidence of non-performing loans. Let us further assume that when crisis hits, banks begin to experience outflows of domestic and foreign deposits. The local currency deposit outflows from local banks amplify the atmosphere of crisis and force the Central Bank to provide liquidity while the outflow of foreign currency deposits are reflected as a capital account drain. As has happened in many countries – including many industrial countries – these conditions in the banking system force the government to provide de-facto guarantee of deposits. Finally, assume also that the fiscal costs of cleaning up the banking system will be 10 percent of GDP – a conservative assumption relative to actual experience. While the total cost of cleaning up the banking system can be spread over a number of years, even the short run costs can easily entail one or two percentage points of GDP — which, other things being equal, will widen the domestic savings gap **and** the current account deficit. In other words, other things being equal, the short run fiscal costs of protecting the banking system can easily turn the assumed budget surplus of 1 percent of GDP into a deficit of 1 percent of GDP.

In short, when crisis hits:

- deposit outflows in both local currency and foreign currencies occur.
- exchange rate falls sharply or, if previously fixed, is devalued by governmental action.
- stock market falls sharply.
- credit-spreads on existing local currency and foreign currency debt widen out sharply.
- credit ratings for both the sovereign and most private entities are subject to successive downgrades reaching "junk" status.

III. INITIAL FINANCIAL IMPACT OF CRISIS

In the very short run — within not more than sixty to ninety days of the advent of the crisis — experience strongly suggests that the rapid drain on a country's reserves will tend to come from four primary sources which are summarized below using modest assumptions relative to actual experience regarding the amounts of such drains.

- Portfolio Investment Inflows reverse from + \$5.0 to - \$2.0 for a swing of \$7.0.
- Half of bank and sovereign debt maturing in six months is paid off at maturity as lenders refuse to renew. Drain on reserves is \$12.5.
- Central Bank uses modest amount of reserves to moderate disorderly fall in exchange rate. Drain is \$3.5 billion.
- Modest amount of domestic "capital flight" occurs. Drain is \$3.0 billion.

Using these assumptions, the country in question would suffer a short term drain on reserves of \$26 billion bringing the remaining level of reserves to only \$9.0 billion. Moreover, and recognizing that (a) it will take time for the trade account to adjust and (b) the prospects of immediately raising new foreign currency balances from private borrowings are nil, the country faces the clear and present danger of literally exhausting foreign reserves thereby having to suspend principle and/or interest payments on some or all foreign currency obligations. Such a threat is neither remote nor academic. Indeed, were it not for actions by the official sector, Mexico in 1995, Thailand, Korea and Indonesia in 1997-8 surely would have exhausted their reserves and, in that event, contagion effects might easily have put other countries in the same position.

One of the reasons there tends to be confusion about the dynamics of sovereign financial crises relates to misunderstandings as to the interaction between stocks and flows especially as it applies to financial variables. For example, it is often the case that the stock of external debt is so large, that only modest changes in flows can produce severe liquidity pressures. This is especially true in situations in which private borrowers have large and uncovered and/or unhedged foreign currency liabilities that can only be satisfied by directly or indirectly drawing down the official currency reserves of the country. In other words, both stocks and flows matter, but when a sovereign liquidity crisis occurs, the critical variables will be the flows as they reflect themselves in the balance of payments and ultimately in the level of a country's official reserves.

It is also important to note that when a country's official reserves are depleted, the distinction between sovereign foreign currency liabilities and uncovered or unhedged private sector foreign currency liabilities becomes essentially meaningless because the only source of the foreign currencies available to private foreign borrowers, in effect, becomes the official reserves. Moreover, as private borrowers sell or swap local currencies for foreign currencies, the result will be further downward pressure on the exchange rate which aggravates the crisis of confidence.

Thus, as we saw in all of the severely troubled Asian countries, the point was reached in which satisfying the foreign currency obligations of private sector entities was reflected almost dollar for dollar in drains on the country's official reserves.

IV. POLICY OPTIONS FOR THE COUNTRY IN CRISIS

Whether a massive liquidity crisis involves a company or a country, almost every financial crisis entails a period of denial and paralysis which typically means that the policy response is delayed. As a practical matter, that delayed policy response implies that a significant part of the damage will occur before there is any meaningful policy response. In turn, this necessarily implies that the burden of restoring confidence will be all the greater requiring that the policy response be all the more forceful.

Given the very real threat that our hypothetical country may quickly exhaust its ability to meet foreign currency obligations, the first policy question to be faced is the country's attitude toward the possibility of suspending some or all such payments. In part, the answer to that question will depend on the composition of its debt, especially the mix between (1) sovereign debt; (2) debt of private banks; and (3) debt of private non-bank corporations. Whether right or wrong, virtually all countries have gone to great lengths to avoid default on sovereign foreign currency obligations and most forms of foreign currency obligations of local commercial banks. That attitude toward sovereign debt is based on the obvious and that attitude toward bank debt is based largely on the view that to default on commercial bank obligations entails an unacceptable risk of triggering the complete collapse of the domestic banking system and the economy at large.

Therefore, let us assume that our hypothetical country decides at the outset that it will seek to avoid default on sovereign and bank debt while non-financial companies and their creditors will be left to fend for themselves. Under these assumptions, the country will go to great lengths to meet scheduled payments on the $50 billion of sovereign and bank debt (see addendum to table 1) with special attention to the $25 billion maturing in less than six months.

In these circumstances, the country in question must quickly mount a broad-based policy response that will restore confidence, but it must do so in a context in which a decline in economic activity is **inevitable** and the need for fresh foreign currency resources is **immediate** and **substantial**. For example, even in the wholly implausible case in which the current account deficit moved immediately to balance, a whopping $10 billion of fresh **net** capital inflows would be needed merely to bring reserves back to two-thirds their pre-crisis level. Of course, the current account cannot move immediatly or even quickly to balance unless domestic economic activity is sharply curtailed.

In other words, quickly after the crisis has struck, the arithmetic and the underlying economics of the external accounts present stark realities as follows:

- Clearly the current account deficit must shrink which implies that the **domestic savings gap must also shrink**. But, the domestic savings gap can only shrink by some combination of (1) a larger budget surplus; (2) the private savings rate increases; or (3) the domestic investment rate declines. Importantly, **any or all** of these conditions **must** entail a reduction in economic growth. Moreover, both the contraction in economic activity and the fiscal costs associated with stabilizing the domestic banking system will tend to **raise** the fiscal deficit thus making a net shrinkage of the domestic savings gap all the more difficult to achieve.

- Looked at from the vantage point of the external accounts, the magnitude and nature of the challenge become all the more clear. In the trade account, exports will **not** adjust quickly even with a falling exchange rate which implies that a disproportionate amount of the short-term adjustment in the trade and current account

must come from the import side. This, of course, is precisely what we have seen in every sovereign financial crisis. However, this, again, necessarily implies a **marked decline** in economic activity. Similarly, in the short run, no help in reducing the current account deficit and reducing the pressure on the country's cash position can be expected from net interest since, if anything, interest costs will rise and large scale restructurings of debt cannot be achieved in the short run.

In short, there **is no conceivable** way to reduce the current account deficit in the short run that does not involve a much slower rate of economic activity. Thus, **either** the current account adjusts **or** it must be financed through the capital account. Indeed, even if the current account in the hypothetical case **is cut in half** in the very short run, the capital account must provide $8 billion of new financing to hold reserves in our hypothetical country at the dangerously low level of about $9.0 billion. At the high water mark of a sovereign financial crisis, securing even $8 billion of new voluntary external finance via the capital account will be a virtual impossibility. For example:

- Foreign direct investment **cannot adjust** in the short run, even if there was a desire on the part of foreigners to step up the pace of such investments.

- Merely holding the line with bank loans – much less securing new loans – will probably entail restructuring existing loans which takes time and will almost surely imply that little or no **net new money** from bank loans will be forthcoming in the short run.

- Equity type foreign portfolio investment almost certainly will not increase in the short run.

- International debt capital markets are likely to be closed to our hypothetical country at least until policy initiatives are in place and conditions have begun to stabilize. Thus, capital inflows, in the form of net new issuance of capital market debt are not in the cards in the short run.

In these circumstances, it is easy to see why countries in this situation find it necessary to turn to the I.M.F. or other official sources for interim or bridge financing. The answer, is simple; **namely: there is literally no other place to turn** for needed interim finance, but even the availability of bridge financing does not alter the harsh realities of the situation. **Major policy adjustments will still be needed.**

Here we confront the ultimate realities as follows:

- With **hindsight** one can easily say the country in question should never have gotten into this situation in the first place, but it is where it is.

- With **foresight** one can easily argue that any international official efforts to step in and provide financial assistance raises a host of policy questions, not the least of which is how to manage the moral hazard problem.

- With **hindsight and foresight** one can easily say that while policy conditionality must accompany any international official intervention, properly shaping such policy conditionality is very difficult.

- While the analytics of all sovereign financial crises will be subject to considerable debate both ex-ante and ex-post, what is not debatable is the following:

- There is **absolutely no way out** of the crisis that does not entail a downward adjustment in economic activity.

- If there is **no** short-term financial assistance to bridge the inevitable timing gaps until policy changes reflect themselves in changed behavior, the burden of adjustment for the country will be much greater in economic, financial and human terms. In other words, the issue is not whether the country in questions will suffer greatly as a result of the crisis, but rather whether it is possible and desirable to attempt to cushion the blow to some extent.

- Default is always a possibility, but whatever its merits, it will not alter the fact that major domestic economic adjustment must occur and default will surely make such adjustment worse. Of course, default raises many other serious questions including the heightened threat of contagion or systemic damage.

To summarize, once a sovereign financial and liquidity crisis strikes, the short run policy options available to a country are very limited. Essentially, **those short run policy options** reduce to some or all of the following:

- Substantial increases in interest rates.
- Partial or comprehensive moratorium on external interest and principle payments.
- Seeking to obtain fresh new money from private sources.
- Seeking to obtain fresh new money from official sources.

In thinking about these policy options, it is important to keep in mind that in the short to intermediate term, the current account deficit (and **therefore** the domestic savings gap) **must** shrink unless there is a totally implausible surge in the capital account surplus that exceeds the current account deficit by enough to provide for a rise in reserves. Short of an act of God, I cannot see any way a country in the position described can avoid a sharp contraction in domestic economic activity. Indeed, as noted earlier, the only question is whether an effort can or should be mounted to limit the fall in economic activity and limit the spillover effects of the crisis to other countries and to the international community.

V. POLICY OPTIONS FOR THE INTERNATIONAL AUTHORITIES

Given the crisis in our hypothetical country, and given the economic and financial realities described above, there are three international channels through which interim or bridge financing might be available to the country in question. They are: (1) bilateral assistance from individual countries; (2) loans or guarantees from the World Bank and/or the multilaterally sponsored regional Development Bank; and (3) emergency financial assistance from the I.M.F. Given contemporary institutional realities, any large scale effort of this nature will involve a central role for the I.M.F.

When confronted with a situation along the lines of the hypothetical crisis described above, the I.M.F., its executive board, and its major contributing countries face a number of extraordinarily difficult decisions. The central question the Fund faces, of course, is whether it should step in and provide financial assistance, and if so, under what terms and conditions. Often, it must face that decision with the high likelihood that a decision not to step in may make matters much worse for the country in question. It then must consider whether the threat of a virtual collapse in the country in question raises contagion and systemic risks that pose a material threat to the international economy and financial system. Finally, the Fund must also consider the consequences of its actions including the fact that if it successfully does step in, its actions will inevitably shield both the country and its domestic and international lenders, creditors, and investors from at least some losses. That is, while significant losses will always occur, official intervention inevitably means that some such losses are likely to be smaller than otherwise would be the case.

The above issues are discussed more fully in the covering paper, but in the context of this illustrative study, the purpose is the limited, but important, goal to illustrate that the dynamics of a contemporary sovereign financial crisis leave policy makers within the country and within the international community of nations nothing but bad choices. Moreover, the choices are such that a major mistake or misjudgment in the policy response could bring with it serious consequences for the world economy and financial system. All of this is, of course, why the effort going forward must place even greater emphasis on crisis prevention rather than crisis management.

Goldman Sachs Global Research Centres

London	Goldman Sachs International Peterborough Court 133 Fleet Street London, EC4A 2BB, England Tel: (44) 171-774-1000 Fax: (44) 171-774-1181	Frankfurt	Goldman, Sachs & Co. oHG MesseTurm D-60308 Frankfurt am Main, Germany Tel: (49) 69-7532-1000 Fax: (49) 69-7532-2800
		New York	Goldman, Sachs & Co. 1 New York Plaza, 47th Floor New York, New York 1000, USA Tel: (1) 212-902-1000 Fax: (1) 212-902-2145
Paris	Goldman Sachs Inc et Cie 2, rue de Thann 75017 Paris, France Tel: (33) 1 4212 1341 Fax: (33) 1 4212 1499	Tokyo	Goldman Sachs (Japan) Ltd. ARK Mori Building, 10th Floor 12-32, Akasaka 1-chome Minato-ku, Tokyo 107, Japan Tel: (81) 3-3589-7000 Fax: (81) 3-3587-9263
Hong Kong	Goldman Sachs (Asia) L.L.C. Asia Pacific Finance Tower, 35th Floor Citibank Plaza, 3 Garden Road Central Hong Kong Tel: (852) 2978-0300 Fax: (852) 2978-0479	Singapore	Goldman Sachs (Singapore) Pte. 50 Raffles Place 29-01 Shell Tower Singapore 048623 Tel: (65) 228-8128 Fax: (65) 228-8474

Goldman Sachs Research personnel may be contacted by electronic mail through the Internet at firstname.lastname@gs.com